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Appendix 3A:
Angels Camp Functional System of Roadways

Angels Camp encompasses 19± miles of collector and local roadways (i.e., excluding State Routes 4 and 49) pursuant to the *City of Angels, Pavement Management Study*, (1999).

The functional classification of streets and highways in Angels Camp is as follows (Calaveras County 2006 Regional Transportation Plan, LSC Transportation Consultants, Inc.):

Arterial

Arterials are roadways that are expected to provide relatively high speeds with minimum interference to the through-traffic flow or a low proportion of access points. Within Calaveras County, all State Routes are classified as Arterials. Arterial roadways within Angels Camp are:

- State Route 49
- State Route 4

Collectors

Collectors move traffic from traffic generators such as residential areas or commercial centers, to other Collectors or Arterials. Collectors are generally located within residential areas, where they connect a number of Local Roads to other-Collectors. Collectors within the Angels Camp Sphere of Influence include:

- Angel Oaks Drive
- Booster Way (State Route 4 to Bret Harte Road)
- Bret Harte Road (Booster Way to State Route 49)
- Demarest Street
- Dogtown Road (State Route 49 to Fricot City Road)
- Finnegan Lane (State Route 49 to Gold Cliff Road)
- Gardner Lane (Murphys Grade Road to Dogtown Road)
- Gold Cliff Road (Finnegan Lane to Tuolumne Avenue)
- Greenhorn Creek Road
- Kurt Drive (State Route 4 to Suzanne Drive)
- Mark Twain Road (Crystal Street to State Route 49)
- Murphys Grade Road
- Stanislaus Avenue (Gold Cliff Road to State Route 49)
- Stockton Road (Angels Oaks Drive to State Route 49)

Local Roads

The Local Road system primarily provides access to residential property and other areas that are not directly served by the Collector or Arterial system. Local Roads within Angels Camp are all roads not classified under the Arterial or Collector categories. There are approximately 123 Local Roads within Angels Camp. Local Roads are listed **Table 3A**. Not all listed Local Roads are city-owned and/or maintained.

Other

As used in the Angels Camp General Plan, **"Connector"** (or connecting roadway) is a *descriptive* term for an Arterial, Collector or Local Road that connects two roadways together. "Connector" is *not* a functional roadway classification and, as such, does not have specified construction standards. Construction standards are based on the connecting roadway's status as an Arterial, Collector, or Local Road.

The City's functional roadway classification for roads that serve both Angels Camp and Calaveras County (i.e., Murphys Grade Road, Dogtown Road) may differ from the County's classification. The City's classification relates to how the road functions with respect to Angels Camp, while the County's functional roadway classification is made in the context of how the road serves the County.

Scenic Roadways (County and State-Designated)

A scenic route is one that traverses an area of outstanding scenic quality. There are currently no locally designated routes in Angels Camp. However, **Implementation Program 3.E.a** proposes an evaluation of the city's roadways to identify those that may be suited for designation as scenic routes.

Pursuant to the 1996 Calaveras County General Plan, the following roadway segments, located within the Angels Camp Area of Interest, are identified as scenic highways:

- State Route 4 between the Stanislaus County Line and Angels Camp
- State Route 4 between Angels Camp and Murphys
- State Route 49 between San Andreas and Angels Camp
- State Route 49 between Angels Camp and New Melones

In addition to the preceding county-designated routes State Route 49 from the Tuolumne County line to the Amador County line and State Route 4 between Angels Camp and Arnold are eligible for the State Scenic Highways Designation. State Route 4 from Arnold to Markleeville has been designated as Ebbets Pass National Scenic Byway. (Source: Calaveras County 2006 Regional Transportation Plan).

Table 3A: Angels Camp Roadways (*Note: Not all roads listed are city owned and/or maintained)*

A	**E** (cont'd)	**M** (cont'd)	**S**
Acorn Drive	El Dorado Court	Mark Twain Road	Sasa Place
Alawa Place	Elderberry Lane	Martina Street	Sams Way
Albasio Court		Mary Belle Way	San Joaquin Avenue
Alpine Avenue	**F**	Mayo Street	Selkirk Ranch Road
Amador Avenue	Fairview Court	McCauley Ranch Road	Sierra Avenue
Annalee Court	Fairview Drive	Mill Road	Slate Circle
Annalee Drive	Fairview Street	Minard Street	Smith Flat Road
Anvil Court	Fiddlers Court	Minna Street	Smokehouse Court
Avey Place	Finnegan Lane	Mistletoe Court	Sonora Street
Avey Ridge Road	Francis Street	Miwuk Way	Springhouse Road
Angel Oaks Drive	Foothill Village Drive	Monte Verda Street	Stanislaus Avenue
		Moose Trail	Stelte Court
B	**G**	Mountain View Street	Stone Corral Court
Baker Street North	Gardner Lane	Murphys Grade Road	Stork Road
Baker Street South	Gold Cliff Road	Myrtle Street	Sultana Lane
Bennett Street	Greenstone Way		South Summit Road
Birds Way	Grinding Rock Road	**N**	Stockton Road
Blair Mine Road	Greenhorn Creek Road	North Star Loop	Suzanne Court
Booster Way			Suzanne Drive
Bragg Street	**H**	**O**	Sycamore Street
Bret Harte Road	Hardscrabble Street	Oak Court	
Brunner Hill Road	Harris Street	Oak Place	**T**
Bush Street	Henry Place	Olivia Place	Thistle Way
	Highland Alley	Oneida Street	Triple Lode Drive
C	Hillcrest Street		Tryon Court
Casey Street	Hillside Court	**P**	Tryon Road
Catalpa Lane	Holly Street	Pacific Street	Tuolumne Avenue
Centennial Road/Lane		Park Avenue	
Chimney Hill Court	**J**	Peri Street	**U**
Church Street	Jumping Frog Way	Perlina Terrace	Utica Lane
Clifton Lane		Pilot Knob Lane	
Copello Drive	**K**	Pine Street	**V**
Cornelia Place	Kids Court	Pioneer Mine Court	Vallecito Street/Road
Corral Loop	Kirby Street	Placer Avenue	
Country Lane	Kurt Drive	Pointe Drive	**W**
Crystal Street		Prospect Court	West Street
	L	Purdy Road	Wilson Street
D	Lakeview Court		
Dads Road	Leaf Court	**Q**	
Depot Road	Lee Lane	Quartz Mine Court	
Demarest Street	Lightner Place		
Deveggio Lane	Lindsay Court	**R**	
Dogtown Road	Live Oak Court	Raggio Court	
Dutsch Court	Live Oak Drive	Ramorini Lane	
	Love Street	Rasberry Lane	
E		Rock Forge Loop	
East Street	**M**	Rocky Ridge Road	
Easy Street	North Main Street	Rolleri Bypass Road	
Easy Circle	South Main Street		
Echo Street	Madison Court		

Appendix 3B: Road System Operating Conditions

Operating conditions of roadways within Angels Camp are described in terms of the roadway's "Level of Service (LOS)." LOS is a qualitative measure of operation conditions along a given section of roadway based on a motorists' perceived ease of movement along a roadway.

Levels of Service, Defined Calaveras County 2006 Draft Regional Transportation Plan	
Level of Service	**Traffic Conditions**
A	**Level of Service A** represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian, is excellent.
B	**Level of Service B** is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.
C	**Level of Service C** is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.
D	**Level of Service D** represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.
E	**Level of Service E** represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform, value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.
F	**Level of Service F** is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level of Service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow which causes the queue to form, and Level of Service F is an appropriate designation for such points.

Levels of Service for Representative Intersections within the Angels Camp Sphere of Influence (Calaveras County 2006 Draft Regional Transportation Plan)		
Description	**AM Peak-Hour LOS**	**PM Peak-Hour LOS**
Pending		

Appendix 3C: Angels Camp Street and Highway Master Plan Map

Insert Map Here

Appendix 3D: Planned Regional Transportation Facility Improvements (Other than Low-Impact Modes of Transportation)

Notes: Updates to this table are pending adoption of the 2005/06 Regional Transportation Plan

This table is intended to provide a guide for potential road improvements on a roadway-by-roadway basis. Therefore, because multiple roadways may included as part of a single facility, a single roadway project may be listed more than once in the following table (i.e., once under each affected roadway).

Planned Regional Transportation Facility Improvements
(Excludes *Low Impact Modes of Transportation* Facilities)

Map (Appendix 3C) Reference	Unmapped Reference	Facility Name	Also Known As (Other Facility Names Used)	Description Design Features	Document Identifying Facility/a/	Potential Funding Source(s)	Cost Estimate (2000-2001 dollars)
ARTERIALS							
A-1	--	**ARTERIAL: State Route 4 North Angels Bypass /b/**	**State Route 4 East Bypass**	North of Junction Route 49 to east of Rolleri Road, construct 2-lane expressway	2001 Regional Transportation Plan	Regional Improvement Program (RIP), Interregional Improvement Program (IIP), Programmed	$31,400,000
--	**A-a**	**ARTERIAL: State Route 4 Bypass Intersection Improvement**		Intersection improvement that provides for grade separation instead of "T" at the east end of the bypass	2001 Regional Transportation Plan	Regional Improvement Program, Local Traffic Impact Mitigation Fees	$400,000
--	**A-b**	**ARTERIAL: State Route 4 to Booster Way Bridge, Widening/Realignment**		Widen and realign Note: Becomes collector on relinquishment	2001 Regional Transportation Plan Table 19, No. 10	Hazard Elimination and Safety, Local	$300,000
--	**A-c**	**ARTERIAL: State Route 4 Passing Lanes**		Angels "Bypass" (State Route 4) to Murphys, construct **passing lanes** (from intersection with North Angels "Bypass" towards Murphys)	2001 Regional Transportation Plan	Regional Improvement Program, Local (road impact mitigation fees), Programmed	$3,450,000

Planned Regional Transportation Facility Improvements (Excludes *Low Impact Modes of Transportation* Facilities)							
Map (Appendix 3C) Reference	**Unmapped Reference**	**Facility Name**	**Also Known As (Other Facility Names Used)**	**Description Design Features**	**Document Identifying Facility/a/**	**Potential Funding Source(s)**	**Cost Estimate (2000-2001 dollars)**
	A-d	**ARTERIAL:** **State Route 4/State Route 49 South Intersection Bridge Reconstruction**		Improve safety and efficient traffic operations (including improved turning movements for buses, trucks, RVs) and enhance the character of the downtown historic district through the use of context sensitive solutions 3 Alternatives + a No Project Alternative. All but the "No Project" alternative include replacing two Angels Creek bridges (#30-0008 and #30-0019) and installing a structure closing the gap between the bridges	Caltrans Project Study Report (PSR), March, 2005		Alt 1: $7-8,000,000 Alt 2: $6-7,000,000 Alt 3: $8-9,000,000 Alt 4: (No Project)
--	**A-e**	**ARTERIAL:** **State Route 49 widen & add passing lanes**		0.4± m north of Cherokee Creek Bridge to 0.1± miles north of Angels Road(in San Andreas) (Sphere of Influence)	2001 Regional Transportation Plan	STIP	$11,242,000
--	**A-f**	**ARTERIAL:** **Wagon Trail Connector**		2-lane expressway from 2.1± miles east of O'Byrnes Ferry/Rock Creek Roads to 2± miles west of State Route 49 (Sphere of Influence)	2001 Regional Transportation Plan	Regional Improvement Program, Interregional Improvement Program (Programmed)	$27,000,000-$37,000,000
A-2	--	**ARTERIAL:** **State Route 49 Bypass**	**Southeast Bypass**	Connect South State Route 49 to East State Route 4	State Route 49 "Bypass" (Southeast) Alignment Study, City of Angels, Weber Ghio & Associates, August, 2002, Figure 2.	STIP	$35,914,000

Planned Regional Transportation Facility Improvements (Excludes *Low Impact Modes of Transportation* Facilities)							
Map (Appendix 3C) Reference	**Unmapped Reference**	**Facility Name**	**Also Known As (Other Facility Names Used)**	**Description Design Features**	**Document Identifying Facility/a/**	**Potential Funding Source(s)**	**Cost Estimate (2000-2001 dollars)**
COLLECTORS							
C-1	**--**	**COLLECTOR: Fairgrounds to Southeast Bypass Connector**		Connector from east side of Fairgrounds to and from proposed Southeast Arterial (A-3)	Angels General Plan	--	--
C-2		**COLLECTOR: Greenhorn Creek Road South Extension**		Greenhorn Creek Road, south along Finnegan Lane, to State Route 49 South, for the purpose of serving local neighborhoods and improving safety and emergency access. The project should include functional, design and traffic-calming features so it is compatible with the character of the residential areas served by the road. Construction of the road should be development-driven.	2001 Regional Transportation Plan; Angels General Plan	Local	$9,534,850
C-3	**--**	**COLLECTOR: Angel Oaks Drive North Extension**		North from the intersection of Angels Oaks Drive and State Route 4 to State Route 49	2001 Regional Transportation Plan	Local	$5,810,300
C-4	**--**	**COLLECTOR: Demarest Extension**		Extend / improve Demarest Street to Stockton Road	Angels Circulation Study	Private	$413,400
C-5	**--**	**COLLECTOR: Dogtown Road Alternatives**		Various Alternatives Widening existing road to 32' within the city limits (Angels Circulation Study). Realign and upgrade the roadway to a 24 foot section for 1.1± miles (2001 Regional Transportation Plan); final route is not yet adopted.	Angels Circulation Study, 2001 Regional Transportation Plan; Dogtown Road Realignment, Weber Ghio & Associates, July 2002; Dogtown Road Realignment Traffic Study, Prism Engineering, July 2003;	Various	See Dogtown Road Realignment Traffic Study

Planned Regional Transportation Facility Improvements (Excludes *Low Impact Modes of Transportation* Facilities)							
Map (Appendix 3C) Reference	**Unmapped Reference**	**Facility Name**	**Also Known As (Other Facility Names Used)**	**Description Design Features**	**Document Identifying Facility/a/**	**Potential Funding Source(s)**	**Cost Estimate (2000-2001 dollars)**
--	**C-a**	**COLLECTOR: Dogtown Road Improvements** (Outside City Limits)		Upgrade to minimum standards from Lakeside Drive to San Domingo Creek Bridge (Sphere of Influence)	2001 Regional Transportation Plan	Local	$460,000
--	**C-b**	**COLLECTOR: Gardner Lane Widening**		Curb, gutter, sidewalk, storm drain and widen Gardner Lane north of Murphys Grade Road	2001 Regional Transportation Plan	Hazard Elimination and Safety, Local	$365,000
C-6	--	**COLLECTOR: Kurt Drive Extension**	**Kurt Drive/Murphys Grade Road Connector**	Extend Kurt Drive to Murphys Grade Road	Kurt Drive Extension, City of Angels, Weber Ghio & Associates, December, 2004	Private, Local	$2,479,775
C-7	--	**COLLECTOR: Tryon Connector**		Possible new connector to serve future development between Tryon Road, Depot Road, Moose Trail, Sonora Street/Tryon Road/Greenstone Mine Road Grade Connector (L-8) and/or SR49 SE Bypass (A-2) (subject to final land use decisions by landowners)	--	Private	--
--	**C-c**	**COLLECTOR: Murphys Grade Road Widening and Realignment**		Widen and realign roadway from SR4/49 to French Gulch Road	2001 Regional Transportation Plan	Local	$6,719,000
--	**C-d**	**COLLECTOR: State Routes 4/49 and Murphys Grade Road-Reconstruct intersection**		Reconstruct intersection to improve visibility of east/west traffic.	Angels Circulation Study	Local, Hazard Elimination and Safety	$355,000
--	**C-e**	**COLLECTOR: Stockton Road Widening**		Improve to collector standards	Angels Circulation Study	Private, City	$1,056,900 ($528,450 = City Cost)
	C-f	**COLLECTOR: Frontage Roads along the State Route 4 North Angels By-Pass**	--	Possible new roads to serve future development along the SR 4 North Angels Bypass, from Murphys Grade Road, Rolleri Bypass and/or the Kurt Drive Extension	Angels General Plan	--	--

Planned Regional Transportation Facility Improvements (Excludes *Low Impact Modes of Transportation* Facilities)							
Map (Appendix 3C) Reference	**Unmapped Reference**	**Facility Name**	**Also Known As (Other Facility Names Used)**	**Description Design Features**	**Document Identifying Facility/a/**	**Potential Funding Source(s)**	**Cost Estimate (2000-2001 dollars)**
--	C-g	**COLLECTOR: Stockton Road/Angel Oaks Drive Intersection Improvements**		Intersection improvements or realignment for the Stockton Road/Angel Oaks Drive intersection	Angels General Plan	--	--
LOCAL ROADS							
L-1	--	**LOCAL: Bennett Street to Angel Oaks Drive North Extension**		Extension to the north as development necessitates	Angels General Plan	Local	$400,000
L-2	--	**LOCAL: Blair Mine Road Connector**		Connection from Blair Mine Road outlet (between lots 443/444) to Stockton Road northwest of Greenhorn Creek Subdivision (to provide west outlet for Greenhorn Creek subdivision and emergency access/egress)	Angels General Plan	Private development	--
L-3	--	**LOCAL: Business Attraction and Expansion Area Service Roads (Murphys Grade, North State Route 4 Bypass, China Gulch, North Main Street)**	Road(s) to serve Multi-Family and Business Attraction & Expansion Development within the area formed by **Murphys Grade Road** (to the west), **SR 4 North Angels Bypass** and the proposed **Purdy Road Connector**	A possible cul-de-sac road serving land northwest of Murphys Grade Road, southeast of the North Highway 4 By-Pass and south of China Gulch to North Main Street (subject to final land use decisions by Caltrans, landowners and Bret Harte High School for the area) Other options may include, but are not limited to a **Purdy Road extension** to **Murphys Grade Road**, connector from **Purdy Road Connector** to **Main Street** across **from Mark Twain Road**	Angels General Plan	Private development	--
--	L-a	**LOCAL: Centennial Road Widening**		--	Angels Circulation Study	Private, City	$292,500 ($196,950 = City Cost)

Planned Regional Transportation Facility Improvements (Excludes *Low Impact Modes of Transportation* Facilities)							
Map (Appendix 3C) Reference	**Unmapped Reference**	**Facility Name**	**Also Known As (Other Facility Names Used)**	**Description Design Features**	**Document Identifying Facility/a/**	**Potential Funding Source(s)**	**Cost Estimate (2000-2001 dollars)**
L-4	**--**	**LOCAL: Copello Drive to Angel Oaks Drive North Extension**		--	Angels General Plan	Private development	--
--	**L-b**	**LOCAL: Finnegan Lane Retaining Wall**		60± ft.	2001 Regional Transportation Plan	Hazard Elimination and Safety, Local	$85,000
L-5	**--**	**LOCAL: Gold Cliff Connector**	**Gold Cliff Road to Greenhorn Creek Road** **Gold Cliff Connector East/West Connector** **McCauley Ranch Road Connector**	Gold Cliff Connector (Gold Cliff Road to Greenhorn Creek Road at McCauley Ranch Road) at location of existing emergency vehicle access.	2001 Regional Transportation Plan; Angels General Plan; Angels Circulation Study; Greenhorn Creek Road Access Road Study, Prism Engineering and Weber Ghio & Associates, June 2005	Local	$450,000
L-6	**--**	**LOCAL: Purdy Road Extension**	**Purdy Road Connector**	Purdy Road to Kurt Drive Extension/Murphys Grade Road Connector	Angels Circulation Study; Angels General Plan	Private, City (City = 50% widening costs)	$682,500 ($76,050= City Cost)
--	**L-c**	**LOCAL: Rolleri Bypass Road/Murphys Grade Road Intersection Realignment**		Relocate PG&E driveway, 450' drainage improvements resurface	2001 Regional Transportation Plan	Hazard Elimination and Safety, Local	$200,000
L-7	**--**	**LOCAL: Sierra Avenue/Tuolumne Avenue "Connector"**	East/West Connector	Greenhorn Creek Road to Tuolumne Avenue Connector (Sierra Avenue)	Angels General Plan; Greenhorn Creek Road Access Study, Prism Engineering, June 2005	--	--
--	**L-d**	**LOCAL: Six Mile Road Improvements**		Upgrade to 24 ft. section (1.0± mile) (Sphere of Influence)	2001 Regional Transportation Plan	Local	$348,000

Planned Regional Transportation Facility Improvements (Excludes *Low Impact Modes of Transportation* Facilities)							
Map (Appendix 3C) Reference	**Unmapped Reference**	**Facility Name**	**Also Known As (Other Facility Names Used)**	**Description Design Features**	**Document Identifying Facility/a/**	**Potential Funding Source(s)**	**Cost Estimate (2000-2001 dollars)**
L-8	**--**	**LOCAL: Sonora Street/Tryon Road/ Greenstone Mine Road Grade Connector**		Connection from Sonora Street to Tryon Road via the Greenstone Mine Road Grade	Angels General Plan	--	-
--	**L-e**	**LOCAL: Sonora Street retaining wall and guard rail**		Construct retaining wall and guard rail from Marina Street to 300' north	2001 Regional Transportation Plan	Hazard Elimination and Safety, Local	$375,000
L-9	**--**	**LOCAL: Foundry Lane Extension**		State Route 4 to Angel Oaks Drive Extension North	Foundry Lane Extension, City of Angels, Weber Ghio & Associates, June 2001	Local	$1,872,375
L-10	**--**	**LOCAL: Tryon Road**		See Sonora Street/Tryon Road/ Greenstone Mine Road Grade Connector	Angels General Plan	--	--
L-11	**--**	**LOCAL: Unnamed Connector - Gold Cliff to Finnegan Lane**		A possible connector between Gold Cliff Road or the proposed McCauley Ranch Road Connector (Gold Cliff Road to Greenhorn Creek Road) (see above) southward to Finnegan Lane.	Angels General Plan	--	--

/a/ See **Appendix 3H** for a detailed listing of all traffic studies cited.

/b/ **Highway 4 Bypass Basics (Project in progress)**

Description:

2.3 miles, two-lane expressway from north 4/49 junction to 0.8 miles east of Rolleri Bypass Road. It crosses Gardner Lane, Murphys Grade Road, the PG&E Penstock, and Angels Creek.

Cost estimate:

$47,361,000 (2006 dollars) including $10.2 million for right-of-way and $1.6 million for right-of-way support.

Milestones:

Project Study Report 10/12/90	Revised Project Study Report: 8/30/91, 6/21/93	Begin Construction: 2/1/2007 - 2/1/2008
Public Hearing: 12/13/2001	Final Environmental Document/Project Report: 6/28/2002	End Construction: 11/1/2010 - 11/1/2011
Route adoption: 11/07/2002	Begin Right of Way Purchase: 7/01/04	
Ready to List 4/1/06	Contractor on Board: 11/01/06 - 11/01/07	

Planned Traffic Signals Angels Circulation Study Identified Traffic Signal Projects		
Facility	**Potential Funding Source**	**Cost Estimate (Year 2000 dollars)**
State Route 4 @ State Route 49 North (Completed)	State	$200,000
Angel Oaks Drive North Extension @ State Route 49 North	State (67%)/City (33%)	$200,000 ($66,000 = City)
Greenhorn Creek Road South Extension @ State Route 49 South	State (67%)/City (33%)	$200,000 ($66,000 = City)
Stanislaus Avenue @ State Route 49	State (67%)/City (33%)	$200,000 ($66,000 = City)
New realigned Dogtown @ State Route 49	State (67%)/City (33%)	$250,000 ($82,500 = City)
State Route 4/State Route 49 South	State (50%)/City (50%)	$200,000 ($100,000 = City)
Kurt Drive/Depot Road @ Vallecito Road (State Route 4 East)	State (50%)/City (50%)	$200,000 ($100,000 = City)
Traffic signals at various intersections (2001 Regional Transportation Plan)	Hazard Elimination and Safety; Local	$709,000

Street rehabilitation projects are identified in the City of Angels Pavement Management Plan (1996, updated 1999). Citywide capital improvement projects are listed in the Angels Camp City-Wide Circulation Study and Traffic Fee Update. Street rehabilitation and capital improvement projects are funded by the City-Wide Traffic Impact Mitigation Fee. Cost estimates for street rehabilitation are $1,502,500, and $1,610,800 for capital improvements (City Council Resolution No. 04-19, Traffic Mitigation Fee 2004 Annual Report).

Appendix 3E: Low Impact Modes of Transportation Plan, Bicycle/Pedestrian Facilities & Support Facilities (Regional Transportation Plan, 2001), Construction Standards

Low Impact Modes of Transportation Plan (See Also Equivalent **Appendix 12A**)		
Proposed Route	**Description**	**Comments**
Amador Avenue	Amador Avenue from Tuolumne Avenue to San Joaquin Avenue	
Angel Oaks Drive/Angels Oak Drive North Extension	South from State Route 4 to Sierra Avenue; North from the intersection of Angel Oaks Drive and State Route 4 (North) to State Route 49 (North)	Angel Oaks Drive Extension North not yet constructed
Bennett Street	Bennett Street from Francis Street to Angel Oaks Drive Extension North	Final alignment not yet adopted
Booster Way	Booster Way from Tryon Park to State Route 4	
Bush Street/Utica Park	Bush Street from the Post Office to Utica Lane and Utica Park	
Copello Drive	Copello Drive from State Route 49 (North Main) to unnamed extension connecting with Angel Oaks Drive Extension North	Alignment not yet adopted
Demarest Street	Demarest Street from intersection with State Route 4/49 (Main Street) to intersection with Stockton Road	
Gardner Lane	Gardner Lane from Murphys Grade Road to Dogtown Road Realignment Road to intersection with State Route 49- preferably across from Francis Street/State Route 49 intersection	Final route to be determined with adoption of Dogtown Road Realignment alternative, preferably across from Francis Street/State Route 49 intersection
Gold Cliff Road I	Gold Cliff Road from Pacific Street to Tuolumne Avenue	
Gold Cliff Road II	Gold Cliff Road from Tuolumne Avenue to McCauley Ranch Road Connector	Connection not yet constructed
Greenhorn Creek Road	Entire length	
Kurt Drive Extension	Kurt Drive from State Route 4 to Murphys Grade Road	Extension not yet constructed Project report recommends Class I facility.
Mark Twain Road	State Route 4/49 (South Main Street) to Crystal Street	
McCauley Ranch Road Connector	Greenhorn Creek Road to Gold Cliff Road along the planned McCauley Ranch Road road connector	
Murphys Grade Road	State Route 4/49 to Kurt Drive Extension	
Pacific Street	Pacific Street from Stanislaus Avenue to Mark Twain Drive	
Purdy Road Connector	Purdy Road connector from Purdy Road to Kurt Drive Extension/Murphys Grade Connector	Purdy Road Connector not yet constructed
San Joaquin Avenue	San Joaquin Avenue from Bighorn Mobile Home Park to Stanislaus Avenue	

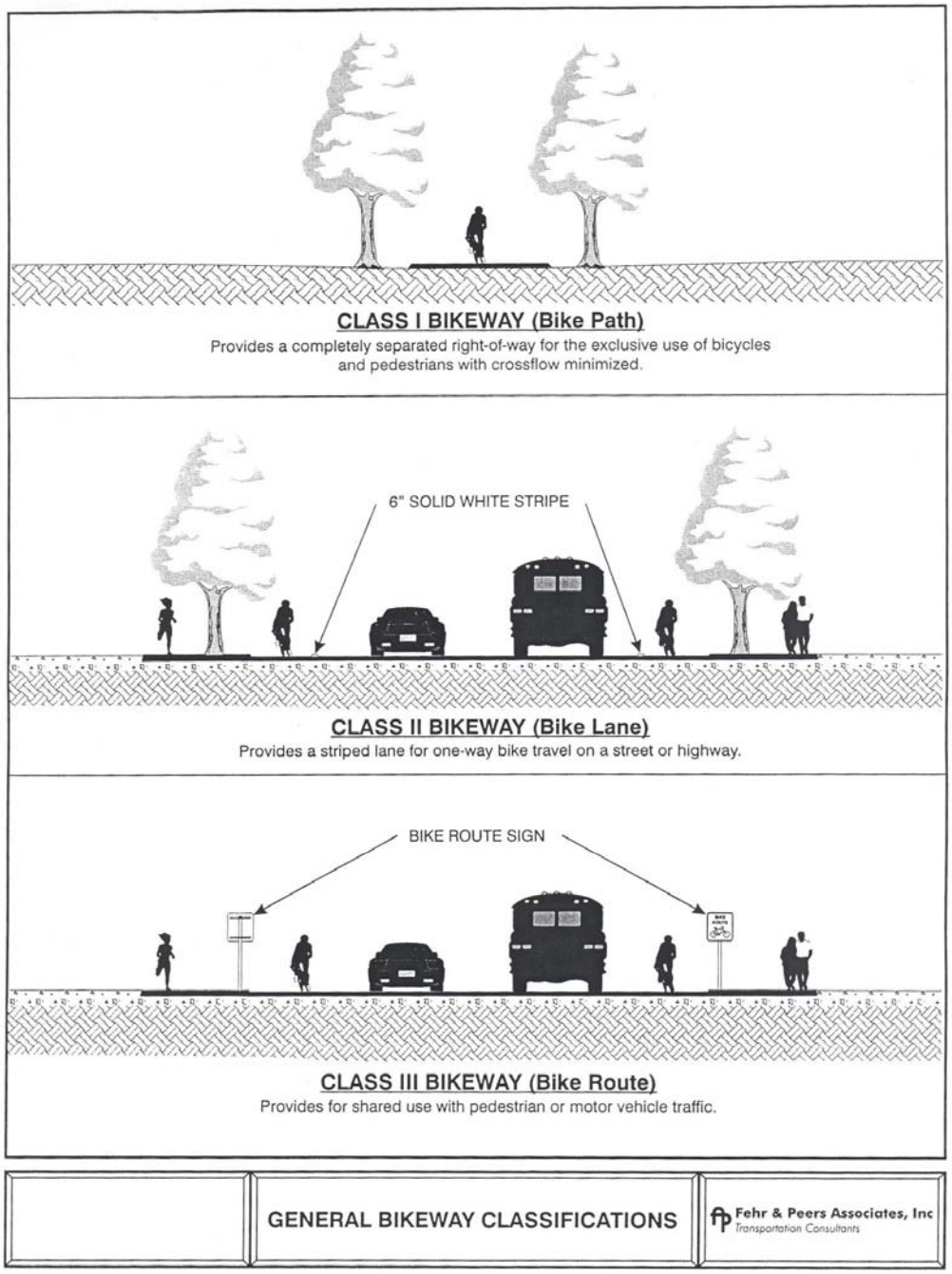
Sierra Avenue	Sierra Avenue from Greenhorn Creek Road to Tuolumne Avenue along the planned Sierra Avenue/Tuolumne Avenue Connector to Greenhorn Creek Road	
Stanislaus Avenue (Portion completed)	Stanislaus Avenue from State Route 4/49 (Main Street) to Gold Cliff Road	Also included in 2001 Regional Transportation Plan
State Route 49 -North	State Route 49 from the State Route 4/49 North intersection to the Copello Drive/State Route 49 intersection with connections to the AMA sports complex	
State Route 4 – North Angels Camp	State Route 4 from the Angel Oaks Drive State Route 4 intersection northeast to the State Route 4/49 intersection	Route to be outside of State Route expressway R.O.W.
State Route 4 - East Angels Camp	State Route 4 East from the South State Route 4/49 intersection at Angels Creek to Rolleri Bypass	
Stockton Road	Stockton Road from State Route 4/49 (Main Street) to Angel Oaks Drive and south to the city limits	
Tuolumne Avenue	Tuolumne Avenue from Amador Avenue to Gold Cliff Road	
Utica Park Bike Lane I	Utica Park to the Angels Mine to 060-014-025 and SR 4/49 through 60-006-06 and 60-014-27	
Utica Park Bike Lane II	Utica Park to Mark Twain Road through 60-006-06 and 60-014-27	
Note: Pursuant to the **Park and Recreation Element** of the Angels Camp General Plan, **Implementation Programs 12.B.i** and **12.D.e** (New Low Impact Modes of Transportation Routes) and **Circulation Element Implementation Program 3.B.c**, additional routes may be added to the preceding list by requiring the construction of low-impact modes of transportation facilities along all new roadways constructed after 2004, which may be integrated into the city's Low Impact Modes of Transportation Plan.		

Construction Standards are described in the following pages.

Bicycle/Pedestrian Facilities & Support Facilities (Regional Transportation Plan, 2001)			
Facility	**Description**	**Funding Source(s)** Transportation Enhancement Activities (TEA) Bicycle Transportation Act (BTA)	**Cost Estimate (2001 Dollars)**
State Route 4	Class III Bikeway from Tryon Park to Booster Way; MP 21.42	TEA/BTA	$118,000
State Route 49 South Pedestrian Facility	400' pedestrian way from southerly intersection	TEA/BTA	$115,000
State Route 49 South Walkway Angels Creek to Centennial Road	Rehab old rock walkway and upgrade existing walk on State Route 49 from Angels Creek to Centennial Road	BTA/Local	$414,000
Altaville School Restroom, Landscaping	260 square foot public restroom facilities and 5,000 square feet of landscaping	BTA/Local	$100,000
Finnegan Lane - Angels Bikeway	Angels Camp Bikeway at Angels Creek	BTA/Local	$208,000
Finnegan Lane Pedestrian Bridge, Retaining Wall	Spreadborough's south to future pump house, widen road, construct rock wall for flood control, install two-way traffic and parking; construct foot-bridge over creek and restore old Mill	BTA/Local	$443,000
Stanislaus Avenue and State Route 49 (portions completed)	Class II bicycle facilities on State Route 49 and Stanislaus Avenue from Murphys Grade Road to Gold Cliff Road. This route would accommodate existing bicycle travel to Bret Harte High School and to Mark Twain Elementary School	TEA/BTA/Local	$246,000
Main Street Sidewalks	Main Street sidewalk improvements from Hardscrabble/Rasberry to State Route 4 North	2005/6 Regional Transportation Plan (Pending)	Pending

Construction Standards

Low-Impact Modes of Transportation Facilities



Detailed construction standards are included on the following page.

Construction Standards
Low Impact Modes of Transportation Facilities

Note: Circulation Element (Chapter 3), Implementation Program 3.B.d and **Park and Recreation Element (Chapter 12), Implementation Program 12.B.d** provide guidance for applying the following criteria to individual facilities.

The following standards, based on bikeway design only, may be revised over time. Check for current design standards in the Caltrans Highway Design Manual (Chapter 1000) online at: www.dot.ca.gov/hq/oppd/hdm/pdf/chp1000.pdf

Class I Facility

Facilities with exclusive right-of-way with cross flows by motorists minimized. Chapter 1000 of the California Highway Design Manual defines Class I bikeways as serving the exclusive use of bicycles and pedestrians.

Class II Facility

Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of low impact modes of transportation with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted.

Class III Facility

Provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists. Local plans sometimes adopt a policy that this facility class not be used.

(Source: City of Davis Comprehensive Bicycle Plan, 2001)

Appendix 3F: State Route 4/49 Bridge Intersection Project Principles and Guidelines Regarding Intersection Design Improvement

City of Angels
SR 4/49 Bridges and Intersection Improvements
Project Principles and Guidelines[1]

1. **Need** (Application and Intent)
    a. Protection of historic downtown and Angels Creek (preservation of community character)
    b. Public Safety (improvement for vehicles, pedestrian and other modes of transportation)
    c. Traffic Congestion (operational improvement is needed)
    d. Bridge Repair (needs to be upgraded to "state-of-good-repair")
    e. Relinquishment Agreement Timetable (needs to meet conditions of agreement between Caltrans and City of Angels)
    f. Maps of Intersection
        i. Regional Perspective showing Current and Future By-passes
        ii. City Circulation Element showing Current and Future Arterials
        iii. Current Intersection with Adjacent Land Usage

2. **Purpose**
    a. Promote efficient and effective traffic flow through the Intersection without damaging downtown economy or historic character
        i. Photos of Downtown
        ii. Photos of Access Roads from each direction
        iii. Photos of Access Road Chokepoints (e.g., Annex, Finnegan's Lane, Downtown pedestrian crossing)
    b. Provide safe and sane interaction of pedestrian and vehicle traffic
        i. Photos of typical congestion (e.g., RVs, double-trailers, rush hour, special events)
    c. Protection of Angels Creek as a cultural and natural resource
        i. Consider bridge rather than culvert design
    d. Properly transfer responsibility from Caltrans to City
        i. Photos showing Angels Creek and Surface Impact Areas
    e. Provide a proper baseline for bridge maintenance
        i. Photos of Bridges

3. **General Design Considerations**
    a. Context
        i. The context of the specific location is the area's historic background
        ii. Vehicle traffic is only one transportation element; people, bikes, and creek flow are also part of the context
        iii. Highway 4 will become a city street
        iv. Finnegan Lane will always be a minor road with little traffic generation
    b. Historic Preservation

i. Protect the historic downtown district
ii. Protect historic architectural elements (i.e. porches, elevated sidewalks)
iii. Mitigate impacts to historic resources in the project area

c. Landscape Character
i. The 4/49 Intersection is a Gateway into the City of Angels
ii. Intersection should be aesthetically pleasing
iii. Topography and 100-year flood considerations

d. Safety and Security
i. Vehicle safety: specific inter-mixture of diverse types: 45 ft. buses and logging and gravel trucks need to be able to negotiate intersection, especially those making right turns from Highway 49 onto Highway 4
ii. Pedestrian safety: specific issues regarding tourists, Main Street usage, and access from parking areas
iii. Special activities safety (annual frog jump, parades, civic creek events)
iv. Consider emergency vehicle access
v. Consider movement of hazardous materials and goods

e. Access and Circulation
i. Other arterial alternate routes and/or collector roads are planned and will be built to reduce traffic at this intersection and through the Downtown and Annex areas
ii. Consider local circulation needs and concerns (i.e. Birds Way, parking lots)
iii. Ensure that circulation patterns will encourage and support visitation of downtown by tourists and business patrons
iv. Intersection should have a traffic-calming affect
v. Class II bikeway should be included
vi. Minimize backing up or stacking of traffic in order to maintain the character and allow enjoyment of the historic downtown district

4. Downtown Business Considerations

a. Economic Impact: Possible impacts to businesses must be considered, minimized, and communicated to public/business owners
b. Maintain building setbacks relative to the traveled way
c. Ensure protection of access to buildings, off-street parking, and loading areas, where they exist
d. Protect use of the area for special events
e. Right-of-Way "take line" should be the minimum necessary in order to preserve historical and other values; limit taking buildings to only what is necessary.
i. Consider relocation of buildings to appropriate locations if buildings must be removed

f. Aggregate number of convenient accessible parking spots to downtown businesses should be maintained or replaced

5. Architectural Components

a. Bridge design aesthetics
b. Signage
c. Site Lighting

6. Landscaping

a. Tree Retention - sensitivity to oaks and other mature species in project area
b. Plant Materials - native plant protection and re-introduction
    i. Elderberry bushes
    ii. Riparian plant materials along creek
c. Surface Materials - alternative surface materials, patterns and colors to reduce reflection and heat retention, improve attractiveness, and help calm traffic
d. Landscape Plan Requirements for maintenance
e. All spaces in right of way should be landscaped
f. Consider public art

7. Angels Creek Preservation

a. Refer to the City's creek design guidelines (to be developed by the City of Angels)
b. Recreation opportunities
c. Access points to creek
    i. Accessibility to creek needs to be maintained/improved
d. Riparian habitat protection

8. Additional Guidelines

a. Foot Bridges to provide non-highway crossing points

9. Truck Traffic

a. Pursue methods of reducing or removing truck through-traffic from the intersection / downtown area

1 The "SR 4/49 Bridges and Intersection Improvements Project Principles and Guidelines" were prepared, following public input and workshops, for inclusion in the Project Study Report for the SR 4/49 Bridges and Intersection Project, prepared by the California Department of Transportation and using Caltrans' Context Sensitive Solutions. The Project Principles and Guidelines were adopted by the City of Angels City Council within Resolution No. 2005-10

Appendix 3G: Transit Models (South Lake Tahoe "BlueGo")

A PUBLIC/PRIVATE TRANSIT PARTNERSHIP AT LAKE TAHOE: THE ""BLUEGO"" EXPERIENCE

Michael A. Harper, FAICP
NACP Board of Directors
Director, "BLUEGO" Board

"BlueGo". A funny name for a public transit system (though when one looks at other transit systems, there seems to be an affinity for clever acronyms). "BlueGo" is apropos, though, for the transit system operated at the south end of Lake Tahoe. "Blue" represents the link with the lake and the continuing effort to maintain its fragile ecology. "Go" represents the forward-looking partnership forged for the operation of the system and the innovative technology utilized for the system.

"BlueGo" is both a fixed-route and on-demand transit system. It is also a system funded through fare-box, public agency contributions and private enterprise contractual funds. The system serves the City of South Lake Tahoe, CA; the suburban unincorporated portion of El Dorado County outside the city's limits; and a portion of Douglas County, NV within the Lake Tahoe basin. The system utilizes GPS and instant communications between busses and the dispatch center to keep the fixed-route system on time and the on-demand system responsive to the customers that use the system. The system also has introduced a kiosk program using interactive software whereby customers can book their own rides, or identify when the next fixed-route bus will be available.

It wasn't easy to create this public/private partnership system that is highly computer dependent. Conceived over a decade ago as a mitigation measure for the expansion of tourist properties, the concept experienced numerous starts and stops as well as continuous changes in participants. It was only three years ago that the right mixes of participants and committed funding came together to create the system that is now just reaching its first anniversary. The effort required operators of free private shuttles (primarily gaming resorts) to donate their fleets of vehicles to a system that would begin to charge a fare. It further required these private shuttle operators to agree to subsidize the system with quarterly contractual funds. The City of South Lake Tahoe had to cede

its public transit system to a board of directors composed of and representing private and public interests. The participants had to agree to use an untested computer based booking system as the primary method of generating ridership and reducing operation costs. Finally, the participants had to have faith that "BlueGo" would be able to provide a better level of service and be so attractive that it would reduce the traditional dependence on the automobile at Lake Tahoe.

In the fall of 2003, "BlueGo" was quietly inaugurated. Murphy's Law roared in right behind. Ridership, especially for the gaming resorts, fell dramatically. Although the drop in ridership had been forecasted, the gaming resort representatives became quite concerned as below-level ridership continued through the start of ski-season and the period over Thanksgiving extending to the Christmas holiday period. The local newspaper in South Lake Tahoe wrote unflattering articles about the new "BlueGo" system. It was quickly discovered that some of the vehicles donated to "BlueGo" were in terrible shape and needed immediate maintenance. Worse, though, was the complete failure of the public to embrace computer based ride booking through a series of kiosks. The first software version required the patience and skill of an experienced computer gamer to book a ride. It was turning potential riders away from the system because there didn't appear to be an alternative to getting a ride. Comments by the private shuttle operators of re-instituting their service during the Christmas holiday service suggested that before the system was three months old the partnership that had created "BlueGo" would collapse.

Before the partnership imploded, though, the board of directors took a number of quick steps to address the problems. These steps could not have occurred as rapidly as they were needed if the board had been a wholly public body, and the board would not have held together to make these decisions if it had been comprised solely of private operators. The first step was to pull the plug (literally) on the kiosk system. The local agency staff that was serving the board of directors was directed to simplify the computer-based ride booking program. At the same time, the board directed additional funding to the contracted system operator to hire more dispatchers to handle phone bookings. Ancillary

to this, phones on the kiosks were more prominently identified. An ambitious effort to educate front desk lodging staff on how to book on-demand rides was launched. The contracted operator of the system was provided more flexibility in recommending changes to the fixed route as well as adding more busses to the on-demand system during peak hours. The operator was also provided more flexibility over what and when existing vehicles were repaired.

The rapid response to these issues by the board of directors and the equally quick implementation of the direction had the desired effect of reversing the decline in ridership. The private shuttle operators ceased talking about instituting a parallel system. The agency staff changed the computer-based program to a simple two-step process to book a ride and reintroduced the kiosks within three months after taking them off-line. Although the original budgeted amount for maintenance increased, the flexibility provided to the contracted system operator has resulted in a more reliable fleet. Most importantly, the reaction to the change in the transit system has generally been positive over the past few months.

With the system no longer taking a nosedive, the board has been able to focus on more long term needs. An assessment of the initial start-up has been analyzed and some suggested changes have been, or will be, made. The board has contracted with an operator for the maintenance of the kiosks – an arrangement that is generating needed revenue for the system through advertising. The board is seeking federal assistance in the purchase of replacement vehicles. The advertising of the system is moving into its second phase effort.

Clearly it is too early to reach a conclusion on how successful "BlueGo" can be. The attitude of those participating in its operation and it use, though, has changed from viewing "BlueGo" as an experiment to viewing the system as one that can be built on to become more successful.

Appendix 3H: Bibliography of Transportation Studies

Bibliography of Transportation Studies Angels Camp 1991-Present		
Title, Date, Author	**Date, Author**	**Lead Agency**
A. City of Angels Circulation Study (Map Only)	1991; Charles R. Leitzell Civil and Traffic Engineering	City of Angels
B. City of Angels General Plan, Chapter 5	Adopted July 6, 1995 Author not identified	City of Angels
C. Calaveras County Bikeway Plan Update Draft Report	February, 1998 Fehr & Peers Associates	Calaveras County Council of Governments
D. Analysis of Local Street Connections with the State Route 4 Bypass, City of Angels, CA; Final Report	July 24, 1998 Fehr & Peers Associates	Calaveras County Local Transportation Commission
E. State Route 49 Arterial Alternative Route Analysis; City of Angels, CA	July 24, 1998 Fehr & Peers Associates	Calaveras County Local Transportation Commission
F. City of Angels State Route 49 Arterial Alternative Route Angel Oaks Drive Extension	January 2000 Weber, Ghio & Associates, Inc.	City of Angels
G. State Route 49 Bypass East/West Alignment Alternative Study OWP 99/00-7	March, 2000 Weber, Ghio & Associates, Inc	City of Angels
H. City of Angels Foundry Lane Extension Final Report OWP No. 00/01-17	June, 2001 Weber, Ghio & Associates, Inc.	City of Angels
I. Angels Camp City-wide Circulation Study and Traffic Fee Update, Final Report	September 14, 2001 Prism Engineering	City of Angels
J. Calaveras County Regional Transportation Plan Update, Final Report	October 1, 2001 (Amendment Pending) Fehr & Peers Associates	Calaveras Council of Governments
K. Final State Route 49 Bypass (Southeast) Alignment Alternative Study OWP 01/02-15	August, 2002 Weber, Ghio & Associates, Inc.	City of Angels
L. Dogtown Road Realignment Traffic Study - City of Angels Draft Report	May 21, 2003 Prism Engineering	City of Angels
M. Dogtown Road Realignment	Weber, Ghio & Associates, July 2002	City of Angels
N. Angels Camp 4 Bypass (Numerous)	2003	Caltrans
O. Park and Ride Plan, District 10	March, 2004 State of California Business, Transportation and Housing Agency Department of Transportation Traffic Operations	Caltrans in cooperation with various agencies
P. City of Angels Kurt Drive Extension	December, 2004 Weber, Ghio & Associates	City of Angels
Q. Project Study Report Highway 4/49 Bridges	January 2005 Also September 21, 2004 (Project Principles and Guidelines, adopted by City of Angels)	Caltrans

Bibliography of Transportation Studies Angels Camp 1991-Present		
Title, Date, Author	**Date, Author**	**Lead Agency**
R. City of Angels Sidewalk Study	June 2000 Weber, Ghio & Associates	City of Angels
S. Greenhorn Creek Access Road Study	June, 2005 Prism Engineering (Traffic Study) Weber, Ghio & Associates (Construction Cost Estimates)	City of Angels
T. Calaveras County 2006 Regional Transportation Plan	Pending LSC Transportation Consultants, Inc.	Calaveras Council of Governments
U. City of Angels Pavement Management Plan	1996, as amended in 1999	City of Angels